

Walk, Roger A.

From: Adams, Candace R.
Sent: Tuesday, April 22, 2003 4:07 PM
To: Walk, Roger A.; Kobal, Gerd; Davies, Bruce D.
Cc: Lau, Raymond W.; Roethig, Hans
Subject: RE: Draft 'Quitting Smoking' module

Roger, The Fagerström instrument has never been validated. I have been of the mindset that the instrument is inappropriate for use by PM for a couple of reasons: one being the fact that it has not been validated. But there are other issues. When constructing a scale such as this, a major consideration or necessity is to provide an adequate sample of the behavior being investigated. In other words, if you're going to test or assess levels of dependence, you would need sufficient numbers of questions that address this broad behavior. Of course it would be nearly impossible to list all the behavioral indices of nicotine dependence. Nevertheless one typically would start out with a long list of questions (based on theory, knowledge and research), subject them to measures of internal consistency (i.e., reliability), and factor analyze them so that you can assess the behavior using the fewest number of questions. The questionnaire items that pass these two tests are typically the better, more informative questions. But you can't start with 6 or 8 questions about a behavior, as Fagerström et al. did, and think you've sampled the entire behavioral domain under investigation.

Historically, one of two traditions is followed when measuring behavior: either a clinimetric or a psychometric approach. Both are based on the premise that the psychological attributes or traits of interest cannot be measured directly but inferred from behavior. We call these psychological constructs or unobserved latent variables. Anyway, the clinimetric approach (which, by the way, Fagerström is a trained clinician) relies heavily on doctors' medical opinion and patients having the savvy and experience to describe exactly how they feel or what they think. In this instance the medic and patient reason together as to what signs and symptoms the patient is evidencing or signs and symptoms constituting a "disease." The clinician develop a questionnaire given feedback from his or her patient. The questionnaire can be very short -- length doesn't matter since the clinician/medic knows how to relate responses to a clinical observation. However, these measures are often highly subjective and two theorists talking about the same construct may select very different types of behavior to define the construct. The psychometrician (which is what people with my training are called) is very much concerned with the number of questionnaire items and variety of content necessary to provide an adequate sample of the behavior. As such, I would want to identify a set of questionnaire items (from a large pool of questions) that are correlated and representative of the construct or latent variable. These methods usually require lots of statistical analyses and issues of validity and reliability are very important. To get to the crux of the matter, the Fagerström scale was developed according to the clinimetric philosophy but is administered as if it were a psychometric instrument.

Now, having said all this, let me answer your original question. The literature suggests the Fagerström scale may only be a valid predictor of dependence among those adults who are considered "highly dependent" (i.e., those who are participating in a smoking cessation study for the second or third time). Given that, the only instance that I would recommend using the Fagerström scale is when we are talking to adults who are known to be highly dependent on smoking (i.e., those interested in cessation therapy).

Hope this helps.

Candace

*So it is ok
for the CDC
approach?*

-----Original Message-----

From: Walk, Roger A.
Sent: Friday, April 11, 2003 10:14 AM
To: Adams, Candace R.; Kobal, Gerd; Davies, Bruce D.
Cc: Lau, Raymond W.
Subject: Draft 'Quitting Smoking' module

4/22/2003

PM3001113790

Dear all,

The draft that Stuart sent to us a few days ago (dated 4/4/03) contains the Fagerstroem questionnaire as part of the CDC's 5-keys process. Do we believe that this tool is adequate for the purpose in this process and what is its validation status?

Regards,
Roger

4/22/2003